UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
www.epa.gov/region08

OCT 0 3 2016

Ref: 8EPR-N

Chip Weber, Forest Supervisor
Flathead National Forest
Attn: Forest Plan Revision
650 Wolfpack Way
Kalispell, Montana 59901

RE: Flathead National Forest Land Management Plan Revision Draft Environmental Impact Statement, CEQ #20160113

Dear Supervisor Weber:

The U.S. Environmental Protection Agency Region 8 has reviewed the May 2016 Draft Environmental Impact Statement (EIS) prepared by the U.S. Department of Agriculture Forest Service (USFS) for revision of the Land Management Plan (LMP) for the Flathead National Forest (NF) and an amendment of the Helena, Kootenai, Lewis and Clark, and Lolo National Forest Plans to incorporate relevant direction from the Northern Continental Divide Ecosystem (NCDE) Grizzly Bear Conservation Strategy. Our comments are provided for your consideration pursuant to our responsibilities and authority under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act (CAA).

Project Background

The Flathead NF encompasses 2.4 million acres in northwest Montana and borders Glacier National Park and a remote portion of British Columbia, Canada. The revised forest plan would update the existing 1986 forest plan, and would guide natural resource management activities on the forest. The following four alternatives are analyzed in the Draft EIS:

- Alternative A is the no-action alternative. The forest would be managed under the 1986 forest plan, as amended to date. Approximately 4% of the forest would be managed as recommended wilderness, 17% as backcountry, and 33% as general forest, with 22% of the Forest suitable for timber production.
- Alternative B is the modified proposed action, developed in response to public involvement efforts including scoping. This alternative emphasizes moving towards desired conditions while providing a balance of ecological, social and economic sustainability. Approximately 8% of the forest would be managed as recommended wilderness, 13% as backcountry, and 30% as general forest, with 21% of the forest suitable for timber production.
- Alternative C emphasizes wilderness values, wildlife habitat security, and fish habitat. Achieving desired conditions would rely more on natural disturbance processes as well as prescribed burning, with the lowest acres suitable for timber production. Approximately 21% of the forest

would be managed as recommended wilderness, 6% as backcountry, and 25% as general forest, with 13% of the forest suitable for timber production.

- Alternative D emphasizes a more active management approach to achieve desired future conditions and social, economic and ecological sustainability. Greater emphasis is placed on the use of timber harvest and other mechanical means to achieve desired conditions. No acres are managed as recommended wilderness, approximately 20% as backcountry, and 30% as general forest, with 21% of the forest suitable for timber production.

The Forest Service also proposes to amend the forest plans of the Helena, Kootenai, Lewis and Clark, and Lolo National Forests ("amendment forests"), to incorporate grizzly bear conservation measures from the draft NCDE Grizzly Bear Conservation Strategy. Habitat conditions and management on the forests have contributed to the recovery of the grizzly bear, which is now proposed for delisting within the NCDE. In 2013, the U.S. Fish and Wildlife Service (FWS) announced the availability of a draft Grizzly Bear Conservation Strategy for the NCDE population. By incorporating relevant direction from this Strategy into forest plans, the Forest Service intends to be able to demonstrate to the FWS that adequate regulatory mechanisms exist on national forests to support a delisted grizzly bear population. The Draft EIS analyzes the following three alternatives for the amendment forests:

- Alternative 1 is the no action alternative. The current provisions for management of grizzly bear habitat in the NCDE would remain in effect. Because of the lack of adequate regulatory mechanisms as determined by FWS, the grizzly bear would remain listed under the Endangered Species Act.
- Alternative 2 is the modified proposed action. This alternative would incorporate the habitat-related management direction of the draft NCDE Grizzly Bear Conservation Strategy, including limits on new grazing allotments and developed recreation sites, vegetation management guidelines, and mitigation for mineral and energy development in certain areas.
- Alternative 3 would add additional forest plan components to increase protections for grizzly bears and their habitat on national forest system lands.

A preferred alternative has not been identified at this time.

EPA's Comments and Recommendations

Many of the recommendations made by the EPA in our scoping comment letter (May 14, 2015) have been addressed by the Draft EIS. Our comments and recommendations related to aquatic resources, air quality, climate change, and mineral resource development are provided in the following sections. Because proposed management actions on the Flathead NF would have a greater likelihood to impact aquatic resources and air quality than proposed grizzly bear conservation measures on the amendment forests, our comments primarily focus on management of the Flathead NF.

(1) Aquatic Resources

Protection of aquatic resources are among the most important issues to be addressed in any NEPA analysis for forest management planning. As a result of the proposed management area category allocations, future actions such as vegetation and habitat management, prescribed fire, motorized use, road construction, oil and gas development, and grazing have the potential to adversely impact aquatic

resources, including surface water, groundwater, wetlands, streams, large rivers, riparian areas, and their supporting hydrology. All action alternatives analyzed in the Draft EIS contain increased protections for water resources relative to current management direction. These proposed forest plan components include:

- Designation of Riparian Management Zones (RMZ), which establish increased protective buffer zones around water resources relative to the existing Riparian Habitat Conservation Areas. Specifically, all intermittent streams will have a 100 foot buffer, and all wetlands will have a 300 foot buffer. Buffers surrounding other waterbody types (e.g., lakes, perennial streams) remain unchanged.
- Establishment of ten new "special areas" specifically designated for protection of fen wetlands. Special areas would be managed in a "substantially natural condition."

The proposed protections will provide a substantial benefit for aquatic resources. Given the EPA's concerns regarding aquatic resources, we are providing recommendations related to specific water resources, as discussed below.

Surface Water Quality

According to information presented in the Draft EIS, water quality on the forest is generally improving, with 17 of 22 streams originally listed as impaired for sediment removed from the State of Montana's Clean Water Act (CWA) Section 303(d) list as of 2014. The remaining five streams have an existing Total Maximum Daily Load (TMDL). Current riparian direction from the Inland Native Fish Strategy (INFISH), implementation of Best Management Practices (BMPs), reduced road construction and a reduction of timber harvest along streams are identified as likely contributing to this improvement. Eight waterbodies within the Flathead NF are currently listed on Montana's 2014 CWA Section 303(d) list (five for sediment and three for other impairments). Sedimentation/siltation is responsible for the impairments of many of the waterbodies, and is the focus of discussion in the Draft EIS. However, we note that additional causes of impairment on Montana's 303(d) list are often due to (or associated with) forest activities such as timber harvest, road building, culvert installation, grazing, etc., including:

- Alteration in stream-side or littoral vegetative covers
- Other flow regime alterations
- Physical substrate habitat alterations
- Sedimentation/Siltation
- Temperature
- Pathogens (e. coli or fecal coliforms)
- Nutrients (i.e., nitrogen and phosphorus).

We recommend that the Forest Service pay special attention to streams listed for any of these parameters during implementation of the forest plan, including monitoring activities. We recommend minimizing disturbance/activities in watersheds that are listed for the parameters mentioned in the bullets above, including any waterbodies that may be listed in future 303(d) lists. In addition, we recommend that Guideline FW-GDL-WTR-01 pertaining to compliance with TMDLs not be limited to "sediment-producing" activities, and instead apply to all ground-disturbing activities, as additional TMDLs for non-sediment pollutants may be established in the future.

Overall, the Montana Department of Environmental Quality (MDEQ) has assessed approximately 5.2% of stream miles within the forest. To provide perspective for the water quality information presented in the EIS, we recommend that the Final EIS include a map showing assessed waterbodies, unassessed waterbodies, and impaired waterbodies. In addition, to provide a baseline for future monitoring of impacts and evaluating of potential influence on downstream water quality, we recommend the Final EIS provide a summary of any available water quality monitoring data (e.g., total nitrogen, total phosphorus, total suspended solids, temperature, etc.). Identification of significant gaps in monitoring data could be targeted for collection through future project monitoring plans for forest lands. We recommend that the USFS conduct pre- and post-disturbance monitoring of water quality before conducting ground-disturbing activities in proximity to waterbodies, which will enable identification of existing water quality concerns as well as any adverse impacts.

Discussion of water quality impacts and water quality protection in the Draft EIS primarily focuses on compliance with existing TMDLs (e.g., Draft EIS Volume 1 Section 3.2.8, Desired Condition FW-DC-WTR-06, and Guideline FW-GDL-WTR-01). We recommend that all streams listed under Category 4a or 5 on Montana's Section 303(d) list, now or in the future, receive special emphasis to improve water quality conditions. In addition to editing the text of the Final EIS to extend the special water quality considerations to all impaired streams, we recommend adding the following guidelines:

- Ground-disturbing activities in watersheds without water quality impaired waterbodies shall be planned, designed and implemented to protect and maintain project area watershed conditions and water quality to maintain continued support of beneficial uses.
- Ground-disturbing activities in watersheds with water quality impaired waterbodies (listed under Category 4a or 5 on Montana's CWA Section 303(d) list) shall be planned, designed and implemented to not cause further degradation of water quality and thereby promote improved watershed conditions and water quality and restoration of full support of beneficial uses.

While the Draft EIS discusses the potential for nutrient loading to streams due to the presence and handling of beetle-killed trees, it does not address organic loading of area waterbodies. Organic matter can impact public water supplies because it interacts with disinfectants used in the drinking water treatment process to form disinfection byproducts, which are a human health concern. Organic loading may also decrease oxygen levels leading to the release of metals such as arsenic, manganese, and iron from sediments. We recommend the Final EIS provide an assessment of the potential for organic loading impacts to drinking water supplies associated with municipal watersheds.

Groundwater Resources

According to the Draft EIS, there is extensive use of groundwater within the Flathead Valley, although most of this use occurs outside of the forest. Because potential water quality impacts to aquifers are not limited by jurisdictional boundaries, we recommend that the Final EIS provide additional information characterizing groundwater resources in the planning area, as a basis for analysis of potential impact and appropriate protections for groundwater supplies. Including site-specific groundwater information in the Final EIS would enhance the USFS's ability to determine where future leasing stipulations and/or mitigation and monitoring measures may be needed to protect current and future drinking water resources. As this information is likely to be revised within the 15-20 year timeframe of the LMP, the

EPA further recommends the USFS include a commitment in the Final EIS to periodically confirm that the most current groundwater information is being collected and considered in the planning area. We suggest this information be evaluated annually, as feasible, where projects are being considered that could affect groundwater resources.

Specifically, we recommend the Final EIS include a map of all groundwater resources of the Flathead NF and expanded discussion to include the following information, if available:

- Identification of major aquifers (including any Sole Source Aquifers) of the forest, their three dimensional extent, the physical and chemical characteristics of their groundwater, estimates of the quantity of water in the aquifers and aquifer recharge rates;
- Location and extent of groundwater recharge areas;
- Location of shallow and sensitive aquifers that are susceptible to contamination from surface activities, including alluvial aquifers along streams and rivers; and
- Location of existing and potential (i.e., those that can reasonably be used in the future) underground sources of drinking water (USDW).[1]

This information can be obtained from the Montana Department of Natural Resources and Conservation (http://www.dnrc.mt.gov). For assistance with groundwater data, please contact Millie Heffner, with the Montana Bureau of Mines and Geology, at 406-444-0581.

Public Drinking Water Supply Sources

The Draft EIS discusses Haskill Basin as a municipal water supply watershed, but does not indicate whether this is the only municipal supply watershed on the forest, or what other public drinking water supply sources exist. The MDEQ has conducted source water assessments for groundwater and surface water sources of public drinking water supplies. The EPA recommends that the Final EIS provide additional information on public drinking water supplies, including a map, appropriate for public dissemination, showing the generalized locations of all source water assessment and protection areas associated with public drinking water supplies. Maps may be available from MDEQ or the EPA upon request. Please note that more specific maps, available from the MDEQ, should be utilized by the USFS when locating future project activities. Please contact Joe Meek, with the MDEQ Drinking Water Protection Program, for more information.

(2) Air Quality

Existing Conditions

The Draft EIS identifies three Federal Class I Areas (Glacier National Park, Bob Marshall Wilderness Area and Mission Mountains Wilderness Area) and one non-Federal Class I Area (Flathead Indian Reservation) within the Flathead NF. In addition to the health-based National Ambient Air Quality

[1]In general, this includes aquifers with a concentration of total dissolved solids (TDS) less than 10,000 mg/L and with a quantity of water sufficient to supply a public water system. Aquifers are presumed to be USDWs unless they have been specifically exempted or if they have been shown to fall outside the definition of USDW (e.g., over 10,000 mg/L TDS).

Standards (NAAQS) that protect ambient air quality, the CAA provides Class I Areas with special protection for air quality and air quality related values (AQRVs), including visibility. Sensitive Class II Areas are areas for which federal land managers have identified air quality and/or visibility as valued resources. We recommend that the Final EIS identify whether the USFS considers the Great Bear Wilderness Area to be a Sensitive Class II Area, and whether the U.S. Fish and Wildlife Service considers the Swan River National Wildlife Refuge to be a Sensitive Class II area. We recommend that the Final EIS provide trends in air quality and AQRVs over the past several years for the identified Class I areas. Such data are available from the MDEQ and/or the VIEWS site for air quality related values (AQRVs) (http://views.cira.colostate.edu/web/). To the extent monitoring information is available, we recommend also providing this information for any Sensitive Class II Areas.

The Draft EIS identifies five PM_{10} Nonattainment Areas (Columbia Falls, Kalispell, Whitefish, Polson and Ronan) and one Carbon Monoxide Nonattainment Area (Kalispell) within the Flathead NF area. In order to better understand the extent of existing air quality concerns, we recommend that the Final EIS include a table showing recent monitoring results and current design values for these areas, in comparison to the NAAQS and MAAQS.

Potential Air Quality Impacts

Impacts of Wildfire and Prescribed Fire: The use of prescribed fire can restore ecological function and offer ecological benefits over the use of mechanical treatment techniques. The Draft EIS includes tables showing past and projected average acres per decade of wildfire and prescribed fire for each alternative. This information provides a useful comparison of the relative scale of potential for smoke impacts to air quality among the alternatives. Qualitative discussion of potential impacts is limited to assurance that adverse effects to air quality and AQRVs would be minimized by adherence to required regulations. Given the presence of multiple sensitive air quality locations, including nonattainment areas as well as Class I and sensitive Class II airsheds, we recommend that the Final EIS provide additional information on potential impacts of fire on air quality and AQRVs. Specifically, based on existing air quality and AQRV information requested above, we recommend including a qualitative discussion of pollutants typically emitted by fire, the potential for impacts to existing conditions in sensitive areas and the typical duration of those impacts.

According to the Draft EIS, the USFS participates in the Montana-Idaho Airshed Group for management of prescribed burns. It therefore appears that the prescribed fire design criteria and monitoring will meet requirements that the EPA supports, including: (1) incorporation of the Interagency Prescribed Fire Planning and Implementation Procedures Guide (April 2014) into the site-specific burn plans designed for each prescribed burn conducted under this project; and (2) public notification of pending burns. We also recommend that the USFS consult with the MDEQ for any modeling, mitigation, or other measures required under state regulations or the State Implementation Plan to address CAA requirements. If prescribed fire may impact the Flathead Indian Reservation, we recommend consulting with the Confederated Salish and Kootenai Tribes as well.

(3) Climate Change

The Draft EIS includes a thorough discussion of climate change and ongoing and reasonably foreseeable climate change impacts relevant to the forest. Providing such background information assists with the

identification of potential impacts of activities on the forest that may be exacerbated by climate change, and to inform consideration of measures to adapt to climate change impacts. The USFS has incorporated these types of key considerations throughout the Draft EIS, with each resource-specific analysis including a discussion of potential climate change-related concerns.

The Draft EIS includes two sections addressing the current state of science on climate change and the potential impacts of forest management activities on greenhouse gas (GHG) emissions and climate change. For clarity, we recommend consolidating the climate change information from Section 3.4 Carbon Sequestration and Section 3.9 Air Quality. Emissions estimates, including estimates of emissions resulting from carbon sequestration changes associated with the proposed agency action can serve as a basis for comparison of impacts to potential climate change effects when preparing a NEPA analysis.

We recommend that the Final EIS refer to the *Final Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews* (Guidance)[2] finalized on August 1, 2016. We note that the final guidance no longer incorporates a numerical threshold for quantitative analysis. According to the Guidance, "When data inputs are reasonably available to support calculations, agencies should conduct GHG analysis and disclose quantitative estimates of GHG emissions in their NEPA reviews." Example tools for estimating and quantifying GHG emissions can be found on CEQ's NEPA.gov website.[3] We recommend quantifying GHG emissions resulting from the proposal in the Final EIS. These emission levels can serve as a basis for comparison of the alternatives with respect to GHG impacts.

(4) Other Considerations

Oil and Gas Development

According to the Draft EIS, there is no active oil and gas extraction occurring on the Flathead NF. There are currently 341 suspended oil and gas leases in the Flathead NF, but no activity can take place on these leases until a separate oil and gas leasing analysis EIS has been completed. Further, no additional leasing can occur without an oil and gas leasing EIS. While the Draft EIS indicates that an oil and gas leasing analysis is not expected soon, it does not provide any details. When such an analysis commences, we will provide additional recommendations related to analysis and mitigation, including leasing stipulations, for oil and gas operations.

Although there are areas within the Flathead NF classified as high or moderate for oil and gas potential, no estimate of the reasonably foreseeable development (RFD) is included in the Proposed Action. Until an RFD is estimated, it is difficult to definitively identify the appropriate level of air quality analysis. At the outset of the NEPA process for the future oil and gas leasing analysis, the EPA would like to discuss with USFS the air quality impact analyses and appropriate mitigation measures, consistent with the process described in the June 23, 2011 National Memorandum of Understanding regarding air quality analyses and mitigation for federal oil and gas decisions through NEPA.

---

[2] *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews.* August 1, 2016. https://www.whitehouse.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf

[3] https://ceq.doe.gov/current_developments/GHG_accounting_methods_7Jan2015.html

Mining

Although mining is not anticipated to be a major use of the Flathead NF, potential environmental effects exist, particularly with regard to risks of mobilization and transport of heavy metals and other pollutants to surface and ground waters. It is therefore important to include appropriate management direction to protect water quality and aquatic resources during mine exploration, development, operation, closure, reclamation, and post-closure. We recommend that the Desired Conditions for locatable and leasable minerals reference the need to protect other resource values and maintain desired conditions for other resources. In addition, while we support the Desired Condition for reclamation of abandoned mine sites where human health risks exist, we also recommend consideration of reclamation of abandoned mine sites to remediate environmental contamination and degradation to fisheries and wildlife.

While guideline FW-GDL-E&M-08 does require "practicable measures to maintain, protect, and rehabilitate water quality..." we recommend providing more detailed direction for protection of water quality in the guidelines. We offer the following suggestions for additional guidelines to protect water quality during development of energy and mineral resources:

- Locate and design mine facilities and mine water management to minimize surface disturbances, control water runoff, minimize erosion and sedimentation, protect hydrologic function and integrity, and prevent the release of acid or toxic or hazardous materials to surface or ground waters.
- Develop inspection, monitoring, and reporting requirements for mineral activities. Evaluate and apply the results of inspection and monitoring to modify mineral plans, leases, or permits as needed to eliminate impacts that prevent attainment of watershed, riparian and aquatic habitat and aquatic species desired conditions, and avoid adverse effects on inland native fish and sensitive aquatic species.
- Identify active and abandoned mines on the forest that pose risks of environmental degradation, particularly acid mine drainage or mobilization and transport of toxic or hazardous materials and prioritize those sites for restoration.

Preferred Alternative

The Draft EIS does not identify the USFS's preferred alternative. We have noticed that since the implementation of the 2012 Forest Planning Rule pre-decisional objection process, occasionally USFS Final EISs have not included identification of the preferred alternative. As required under Section 1502.14 of the Council on Environmental Quality's Regulations for Implementing the National Environmental Policy Act, the preferred alternative will need to be identified in the Final EIS unless another law prohibits expression of such a preference. It seems reasonable to identify a preferred alternative in the Final EIS to ensure that the public and interested stakeholders have an opportunity to comment through an open notice and public comment period. We recommend that the USFS's preferred alternative is clearly described in the Final EIS.

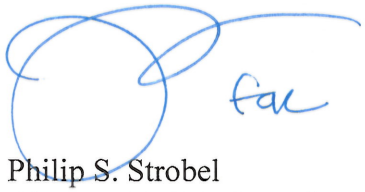
Closing and EPA Rating

Based on our review, the EPA is rating the document and all alternatives as "Environmental Concerns – Insufficient Information" (EC-2). The "EC" rating means that the EPA's review has identified potential

impacts that should be avoided in order to fully protect the environment, including potential impacts to wetlands and water quality. The "2" rating means that the Draft EIS does not contain sufficient information for the EPA to fully assess environmental impacts. A description of the EPA's rating system can be found at: http://www2.epa.gov/nepa/environmental-impact-statement-rating-system-criteria.

We appreciate the opportunity to comment on this document and hope our suggestions will assist you with preparation of the Final EIS. We would be happy to meet to discuss these comments and our recommendations. If you have any questions or requests, please feel free to contact either me at 303-312-6704, or your staff may contact Molly Vaughan, at 907-271-1215 or vaughan.molly@epa.gov.

Sincerely,



Philip S. Strobel
Director, NEPA Compliance and Review Program
Office of Ecosystems Protection and Remediation